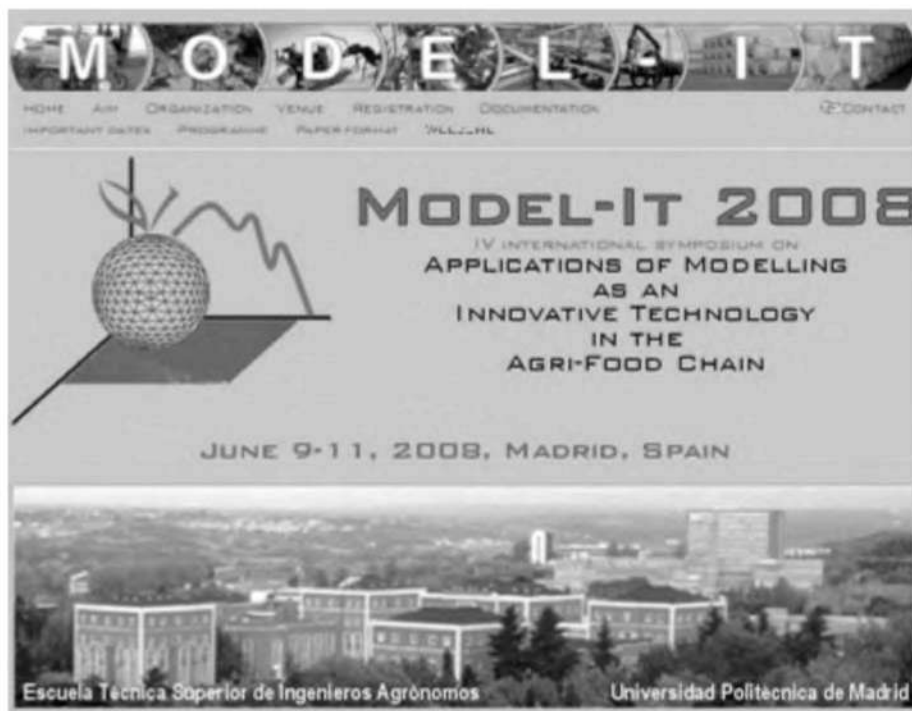


Model-IT 2008, Better Equipped for Life...



José Miguel Aguilera, Professor of civil industrial engineering at the Catholic University of Chile, talked about microstructures in food. After a more general introduction into microstructures and food processing showing the increasing opportunities of designing functional microstructures to satisfy the growing demands in the food industry, he took us along into his recent area of interest of gastronomic engineering. In this area he works together with famous chefs to apply scientific principles to achieve provocative sensations in food tasting and with that made everyone's mouth water.

Finally Francisco José Vico, leader of the Research Group in Biomimetics and Associate Professor at the School of Computer Science both of the University of Málaga, Spain, gave an intriguing overview of biomimetics. Biomimetics is a relatively new science that studies biological systems to imitate them and to take creative inspiration from them to solve human engineering problems. In this way man can learn from the refined systems developed by nature over millions of years. What better model could there be?

Furthermore, the symposium offered the participants four workshops specially prepared for this occasion. The workshop on *Data Mining* gave a practical introduction to a number of techniques for multivariate analysis, both supervised and unsupervised, to explore large amounts of data and to extract relevant information from non random behaviors. These techniques have enabled the transfer of scientific methodologies from the laboratory to the industry by revealing the latent information hidden within large data sets. The workshop on *Calibration Transfer in Spectrometric Devices*

Web page where details on the symposium can be found.

The 4th International Symposium on Applications of Modelling as an Innovative Technology in the Agri-Food-Chain (Madrid, Spain) was hosted by the Universidad Politécnica de Madrid as an initiative of Working Group 5 of COST action 924. The earlier Model-IT symposia were organized in The Netherlands (1998), New Zealand (2001) and Leuven (2005), and their results and publications by ISHS have shown that the tradition that started ten years ago is still attractive. Model-IT 2008 was organised under the aegis of a number of international and Spanish professional institutions (ISHS, IIR, EurAgEng, ESCH, and

SEA), which emphasizes the broad goal of Model-IT to cater the wider agri-food chain with new modelling concepts. For proper chain management, good and reliable predictive models covering all aspects of the food chain are necessary to control and optimise the food chain, going from farm to fork, with respect to quality and safety. This wide range was mirrored by the expertises displayed in the various conference contributions.

In total, 41 oral and 20 poster presentations were presented during the three day symposium attracting 100 participants coming from 23 countries from all over the globe. Although the number of participants was limited, the quality of interaction was inversely proportional to this. The symposium offered three invited speakers highlighting the application and potential of modelling within their own domain.

Theo Geisel, Director from the Max-Planck-Institute for Dynamics and Self-Organization and Professor of Theoretical Physics, University of Göttingen, gave an interesting talk on complexity observed in modern epidemics. By combining simple kinetic models for the transfer of diseases with the more complex approach of super diffusion to account for modern human travel, it comes within reach to forecast the geographic spreading of modern epidemics. This concept was illustrated using historical data on the spreading of US dollar bills.

Dr. Maarten Hertog, responsible for the workshop Kinetic Models.



Dr. Francisco Vico, invited speaker talking on biomimetics.



focused on fundamental causes for the spectral variations between two spectrometers and how these differences can be overcome by calibration transfer. This is of the utmost importance to allow comparison of results obtained with different devices, ensuring reproducibility and robustness of the results in different campaigns. A third workshop on *Image Processing of Multi- and Hyperspectral Vision* provided a general overview on the multi- and hyperspectral vision techniques applied in the agri-food sector. Participants were to work with several relevant image processing techniques including the extraction of parameters for the characterization of both internal and external quality in agricultural products. Finally, a workshop was presented on *Kinetic Model Development and Calibration Based on Ordinary Differential Equations*. The use of these equations is widely spread for the development of kinetic models. A general introduction was given on the power and pitfalls of ordinary differential equation (ODE) based models using hands-on exercises after which the participants were to implement their own model.

After three days of an intensive and successful symposium the participants were sent away with a take home message from Goethe to *venture ourselves into knowledge and science to*



Detail of the computer rooms where the workshops took place.

return better equipped for life and to meet again at the next Model-IT symposium to be held in Paris, France in 2011!

On behalf of the Organizing Committee of Model-IT 2008, Pilar Barreiro Elorza and Maarten Hertog

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The Patriarch Still Wants to Live!

During the 27th International Horticultural Congress held in Seoul in 2006, and in my capacity as Chair of the ISHS Section Nuts and Mediterranean Climate Fruits, I suggested to organize a Symposium with the topic "Current and Potential Uses of Nut Trees Wild Relatives". Two countries offered to host the event: Iran and Georgia. Both countries dispose of an extraordinary richness in plant germplasm, an important aspect to attract the scientific community to participate in a transversal Symposium like this. The Board and Council of the ISHS voted in favour of Georgia because, up to now, there had been no opportunity to organize an ISHS conference in this country.

The Symposium, which has the scope to focus the attention of the scientific world on the high potential (for breeding, landscape, uses and traditions, etc.) hidden in Crop Wild Relatives, has been set in the calendar for October 2008.

The two Conveners appointed, Dr. Zviad Bobokashvili, researcher at the Georgian Research Institute of Horticulture, Department of Fruit and Vine Crop Germplasm; and Dr. Maya Marghanian of the Georgian Ministry of Agriculture, worked hard to get this conference on track for the last two years and were indeed

very close to harvest the fruits of their efforts to unite participants to discuss a highly pressing topic: some issues in the vast area of plant genetic resources. The arguments used in the preliminary documents of this meeting were adopted by a number of scientists and later also politicians of the region showed their full interest, resulting in already a number of political initiatives targeted at the safeguard of genetic resources. In line of what is happening in the international area, the International Treaty, signed in the realm of the FAO, calls on all countries to safeguard and sustainably utilize plant genetic resources in order to be able to hand them over to future generations. Often, however, man loses the light of reason, and in a second, destroys the patient work of years.

The war between Georgia and Russia is a terrible event that the scientific world cannot accept. Raising arms to solve controversial issues between countries is not the way to go. The course of history, however, interferes today with the Symposium of Tbilisi, Georgia and forces us to put things on hold.

When I was a boy, my father taught me to accept people for what they are and what they do. As an adult, I have applied his lessons and

can proudly say that I shared my table with many friends, Muslims or Christians, atheists or preachers. I always approached ethnic, religious or national diversity with an inner sentiment of friendship. This approach to different people is the reason why I was anxious about the fate of my friends during the earthquake in China and the hurricane in Louisiana; just as I am anxious these days for my Georgian and Russian friends. This is what I suggest the spirit of a researcher must be.

After the hurricane comes the calm... and, waiting for the calm, we suspend today the Symposium in Georgia but determined to re-activate it, where it should be held in the same place, when the quietness of peace will allow us to listen to the Russian speaker who speaks to us about Vavilov, or a Georgian fellow who tells us about a Patriarch living in the Vashlovani forest in Georgia, about this 900-years-old tree of *Pistacia mutica* that doesn't want to die under the bombs but wants to keep on living.

Damiano Avanzato, Chair ISHS Section Nuts and Mediterranean Climate Fruits